

REMARKS

This communication responds to the non-final Office Action mailed on July 13, 2007. Claims 1-9 and 18-29 are currently pending. Claims 1, 6-8, 18, 22, 25, and 26 have been amended. Claims 10-17 have been cancelled. Claims 27-29 are new. In view of the following remarks, as well as the foregoing amendments, Applicants submit that this application is in complete condition for allowance in this regard.

Election/Restrictions

Applicants hereby affirm the provisional election without traverse of claims Group I, claims 1-9 and 18-26. Applicants reserve the right to pursue the non-elected claims 10-17 of Group II without prejudice in a divisional application.

Rejections of Claims Under 35 U.S.C. § 112, Paragraph 2

Claims 18-21 stand rejected under 35 U.S.C. § 112, Paragraph 2 as indefinite. As explained in Applicants' specification at paragraph 35 and as shown in Figure 2B, the "surface features" that are set forth in these dependent claims are the features 43 present on the inwardly-facing surface in addition to the grooves also set forth in independent claim 1. Although Applicants' specification also refers to features 41, Applicants believe that the similarity in terminology in the specification does not render claims 18-21 indefinite as claim 1 expressly sets forth "axially-extending grooves". Consequently, Applicants request that the Examiner withdraw this rejection.

Rejections of Claims Under 35 U.S.C. § 102

Claims 1-6, 8, 18-21, and 23-25 over Brown

Claims 1-6, 8, 18-21, and 23-25 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 2,591,046 to Brown et al. (hereinafter *Brown*). The Examiner contends that *Brown* shows or teaches all the elements of the rejected claims. Applicants respectfully disagree for the reasons set forth below.

Independent claim 1, as amended, sets forth that the barrel of the syringe has a “sidewall including an inwardly-facing surface contacted by the fluid, a plurality of axially-extending grooves defined in said inwardly-facing surface, and a tapered region between said inwardly-facing surface and said second opening, said inwardly-facing surface and said axially-extending grooves configured to be contacted by the fluid, and said axially-extending grooves extending from approximately said first opening to approximately said tapered region.” In contrast, *Brown* discloses a syringe barrel (11) with grooves (25) that are localized over a small distance between the openings at the opposite ends of the syringe barrel (11). In particular, the grooves (25) are localized axially near the center of the barrel (11). The grooves (25) serve to permit the stored fluid (30) to bypass the piston (16) and mix with a dry medication (29), but only when the syringe is actually used by a force applied to plunger (21) so that the piston (16) is moved relative to the barrel (11) to the location of the grooves (25). Hence, the grooves (25) are intentionally localized so that, as the piston (16) is moved by the force applied to the plunger (21), the grooves (25) are eventually available to the stored fluid (30) as flow channels to permit the fluid (30) to flow past the piston (16) and mix with the dry medication (29). Otherwise, the grooves (25)

would not block the flow of the stored fluid (30) past the piston (16) to reach the dry medication (29).

In order for a reference to anticipate the invention in a claim, the reference must teach each and every element in the precise arrangement set forth in the claim. *See* MPEP § 2131. If the reference fails to teach even one of the claimed elements, the reference does not and cannot anticipate the claimed invention. Because *Brown* fails to disclose “said axially-extending grooves extending from approximately said first opening to approximately said tapered region,” *Brown* fails to anticipate independent claim 1. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

Because claims 2-6, 8, 18-21, and 23-25 depend from independent claim 1, Applicants submit these claims are also patentable for at least the same reasons discussed above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Brown*. For example, the Examiner contends on page 4 of the Office Action that *Brown* discloses that the “surface roughness is on the order of millimeters and greater than 5.1 microns.” However, Applicants cannot find any disclosure of these numerical values in *Brown*.

Claims 1-6, 8, 18-21, and 23-26 over Bachynsky

Claims 1-6, 8, 18-21, and 23-26 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,971,953 to Bachynsky (hereinafter *Bachynsky*). The Examiner contends that *Bachynsky* shows or teaches all the elements of the rejected claims. Applicants respectfully disagree for the reasons set forth below.

Independent claim 1, as amended, sets forth that the barrel of the syringe has a “sidewall including an inwardly-facing surface contacted by the fluid, a plurality of axially-extending grooves defined in said inwardly-facing surface, and a tapered region between said inwardly-facing surface and said second opening, said inwardly-facing surface and said axially-extending grooves configured to be contacted by the fluid, and said axially-extending grooves extending from approximately said first opening to approximately said tapered region.” In contrast, *Bachynsky* discloses a syringe barrel (11) with grooves (30) that are localized over a small distance between the openings at the opposite ends of the barrel (11). In particular, the grooves (5) are localized axially near the center of the barrel (11). The grooves (30) serve to permit the stored fluid (23) to bypass the piston (32) and mix with a dry medication (24), but only when the syringe is actually used by a force applied to plunger (40) so that the piston (32) is moved relative to the barrel (11) to the location of the grooves (30). Hence, the grooves (30) are intentionally localized so that, as the piston (32) is moved by the force applied to the plunger (40), the grooves (30) are eventually available to the stored fluid (23) as flow channels to permit the fluid (23) to flow past the piston (32) and mix with the dry medication (24). Otherwise, the grooves (30) would not block the flow of the stored fluid (23) past the piston (32) to reach the dry medication (24).

In order for a reference to anticipate the invention in a claim, the reference must teach each and every element in the precise arrangement set forth in the claim. *See* MPEP § 2131. If the reference fails to teach even one of the claimed elements, the reference does not and cannot anticipate the claimed invention. Because *Bachynsky* fails to disclose “said axially-extending grooves extending from approximately said first opening to approximately said tapered region,”

Bachynsky fails to anticipate independent claim 1. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

Because claims 2-6, 8, 18-21, and 23-26 depend from independent claim 1, Applicants submit these claims are also patentable for at least the same reasons discussed above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Bachynsky*. For example, the Examiner contends on page 4 of the Office Action that *Bachynsky* discloses that the “surface roughness is on the order of millimeters and greater than 5.1 microns.” However, Applicants cannot find any disclosure of these numerical values in *Bachynsky*.

Claims 1-6, 8, 18-21, and 22-25 over Grabenkort

Claims 1-6, 8, 18-21, and 22-25 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,779,668 to Grabenkort (hereinafter *Grabenkort*). The Examiner contends that *Grabenkort* shows or teaches all the elements of the rejected claims. Applicants respectfully disagree for the reasons set forth below.

Independent claim 1, as amended, sets forth that the barrel of the syringe has a “sidewall including an inwardly-facing surface contacted by the fluid, a plurality of axially-extending grooves defined in said inwardly-facing surface, and a tapered region between said inwardly-facing surface and said second opening, said inwardly-facing surface and said axially-extending grooves configured to be contacted by the fluid, and said axially-extending grooves extending from approximately said first opening to approximately said tapered region.” In contrast, *Grabenkort* discloses a syringe barrel (11) with grooves (22) that localized near only one of the opposite openings – open end (16). As apparent, the grooves (22) are widely separated from the

opposite open end and tapered region (12). The grooves (22) do not extend from the open end (16) to the tapered region (12). In fact, the grooves (22) abruptly end a short axial distance along the barrel (11) from the open end (16). The grooves (22) function to permit vapor resulting from thawing the frozen stored fluid (30) to escape the barrel (11) when the syringe is used. *See* col. 4, lines 58-61.

In order for a reference to anticipate the invention in a claim, the reference must teach each and every element in the precise arrangement set forth in the claim. *See* MPEP § 2131. If the reference fails to teach even one of the claimed elements, the reference does not and cannot anticipate the claimed invention. Because *Grabenkort* fails to disclose “said axially-extending grooves extending from approximately said first opening to approximately said tapered region,” *Grabenkort* fails to anticipate independent claim 1. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

Because claims 2-6, 8, 18-21, and 22-25 depend from independent claim 1, Applicants submit these claims are also patentable for at least the same reasons discussed above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Grabenkort*. For example, the Examiner contends on page 4 of the Office Action that *Brown* discloses that the “surface roughness is on the order of millimeters and greater than 5.1 microns.” However, Applicants cannot find any disclosure of these numerical values in *Grabenkort*.

Claims 1-8, 18-21, and 23-25 over Reinhard

Claims 1-8, 18-21, and 23-25 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,788,670 to Reinhard et al. (hereinafter *Reinhard*). The Examiner contends that

Reinhard shows or teaches all the elements of the rejected claims. Applicants respectfully disagree for the reasons set forth below.

Independent claim 1, as amended, sets forth that the barrel of the syringe has a “sidewall including an inwardly-facing surface contacted by the fluid, a plurality of axially-extending grooves defined in said inwardly-facing surface, and a tapered region between said inwardly-facing surface and said second opening, said inwardly-facing surface and said axially-extending grooves configured to be contacted by the fluid, and said axially-extending grooves extending from approximately said first opening to approximately said tapered region.” In contrast, *Reinhard* discloses a syringe barrel (1) with grooves (5) that are localized over a small distance between the openings at the opposite ends of the syringe barrel (1). In particular, the grooves (5) are localized axially near the center of the barrel (1). The grooves (5) function to permit the stored liquid in chamber (3a) to bypass the plunger (9) and mix with a dry component in chamber (2a), but only when the syringe is actually used by a force applied to plunger (9) so that the piston (8) is moved relative to the barrel (1) to the location of the grooves (5). *See* col. 6, lines 23-42. Hence, the grooves (5) are intentionally localized so that, as the piston (8) is moved by the force applied to the plunger (9), the grooves (5) are eventually available to the stored liquid as flow channels to permit the liquid in chamber (3a) to flow past the piston (8) and mix with the dry component in chamber (2a). Otherwise, the grooves (5) would not block the flow of the stored liquid past the piston (8) to reach the dry component in chamber (2a).

In order for a reference to anticipate the invention in a claim, the reference must teach each and every element in the precise arrangement set forth in the claim. *See* MPEP § 2131. If the reference fails to teach even one of the claimed elements, the reference does not and cannot

anticipate the claimed invention. Because *Reinhard* fails to disclose “said axially-extending grooves extending from approximately said first opening to approximately said tapered region,” *Reinhard* fails to anticipate independent claim 1. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

Because claims 2-8 and 23-25 depend from independent claim 1, Applicants submit these claims are also patentable for at least the same reasons discussed above. Furthermore, these claims recite unique combinations of elements not disclosed or suggested by *Reinhard*. For example, the Examiner contends on page 4 of the Office Action that *Brown* discloses that the “surface roughness is on the order of millimeters and greater than 5.1 microns.” However, Applicants cannot find any disclosure of these numerical values in *Reinhard*.

Rejection of Claims under 35 U.S.C. § 103(a)

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Brown*, *Bachynsky*, *Grabenkort*, or *Reinhard* in view of U.S. Patent No. 4,846,796 to Carrell et al. (hereinafter *Carrell*). Applicants submit that dependent claim 9 is patentable for at least the same reasons as independent claim 1. To establish a *prima facie* case of obviousness, the prior art references being combined must teach or suggest all the claim limitations. See MPEP § 2143.03. Furthermore, dependent claim 9 recites a unique combination of elements not disclosed or suggested by the combination of *Brown*, *Bachynsky*, *Grabenkort*, or *Reinhard* with *Carrell*.

New Claims

Claims 27-29 have been submitted as new claims that recite unique combinations of elements not taught, disclosed or suggested by the art of record.

Conclusion

Applicants have made a bona fide effort to respond to each and every requirement set forth in the Office Action. In view of the foregoing remarks, this application is submitted to be in complete condition for allowance and, accordingly, a timely notice of allowance to this effect is earnestly solicited. In the event that any issues remain outstanding, Applicants invite the Examiner to contact the undersigned to expedite issuance of this application.

Applicants do not believe fees are due in connection with filing this communication. If, however, any petition or additional fees are necessary because of this communication, the Commissioner is hereby authorized to charge any under-payment or fees associated with this communication or credit any over-payment to Deposit Account No. 23-3000.

Respectfully submitted,
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